

COLORADO RIVER RECOVERY PROGRAM
FY 99 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: 101

- I. Project Title: An evaluation of the role of tributary streams for recovery of endangered fishes in the upper Colorado River basin.
- II. Principal Investigator(s): Harold M. Tyus, Principal Investigator, and James F. Saunders, III, Co-principal Investigator.

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III. Project Summary:

This study discusses the role of tributary streams in supporting life history needs of the four endangered big-river fishes, with separate sections for each tributary stream studied. The report includes sections on relative suitability of the various streams to the different fish species, direct benefits that may accrue to the fish (e.g., increased food supply), and indirect benefits to the fishes due to maintenance of the downstream system (e.g., water quantity, quality, sediment supply). Central to the end product is a matrix that provides a convenient comparison of characteristics of the different tributaries and summarizes major findings about the tributaries, including their suitability with respect to water quantity and quality, sediment supplies, food sources, habitat size, nonnative fishes, and others. Finally, the report will include recommendations for integrating our findings about tributaries with the broader recovery efforts for the upper basin.

IV. Study Schedule: 1999-2000

V. Relationship to RIPRAP:

This project is proposed under RIPRAP Section V. F: Assess relative biological importance of tributaries and their potential contribution to endangered fish recovery.

VI. Accomplishment of FY 99 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

(A) Tasks:

–to determine the geographic extent and frequency of use of endangered fish habitat in upper basin tributaries: **Completed**.

–to determine which tributaries may especially influence endangered fish habitat in downstream areas because of their location: **Completed**

–to determine direct and indirect benefits that may accrue for each of the selected tributaries. **Completed**

–to relate identified benefits with specific life history strategies and stages of the affected fish or fishes: **Completed**

–to evaluate potential obstacles that may limit use of any identified benefits by the fishes: **Completed**

–to integrating the above determinations into a more dynamic view that contrasts potential benefits against obstacles that may preclude full realization of recovery measures: **Nearing Completion**

–to identify data gaps and needs and recommend further work necessary to reach management decisions about various recovery options: **In Progress**

–to prepare report summarizing findings: **In Progress**

(B) Initial findings: With possible exception of small tributaries lower in the basin, virtually all tributary streams either directly or indirectly influence populations of the listed fishes, or may play a role in their recovery. However, there is a great difference between streams in their importance in supporting populations of listed fishes. The Yampa and Gunnison rivers should be considered just as important for recovery of the listed fishes as the respective tributary mainstems, and in some cases more important. Smaller tributaries may serve important recovery functions on a restricted scale.

VII. Recommendations:

–Tributary streams are of critical importance to recovery efforts, yet some of the important streams continue to be changed by anthropogenic effects. An effort should be made to continue evaluating the role of tributary streams by assessing the ongoing changes to habitat, prioritizing tributaries with respect to recovery potential, and protecting important reaches from continuing impacts.

–The recovery program should be a participant with state water quality agencies in the development of TMDL's for suspended sediment in the UCR.

–Nonative fish control in tributaries should be given more priority by cooperating agencies.

–Important reaches not now covered by Critical Habitat Designation should be identified and steps taken to expand coverage if warranted.

VIII. Project Status: Funds were delayed for initiating this project. It is ongoing and on track.

IX. FY 99 Budget Status

A. Funds Provided: \$25,000

B. Funds Expended: \$22,000

C. Difference: \$ 3,000

D. Percent of the FY 99 work completed, and projected costs to complete:
90%/\$3,000.

E. Recovery Program funds spent for publication charges: none

X. Status of Data Submission: Not applicable

I. Signed: Harold M. Tyus December 15, 1999
Principal Investigator Date